

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FOREST SITE PREPARATION

(Acre)

CODE 490

DEFINITION

Treating areas to encourage natural regeneration of desirable trees and shrubs or to permit artificial regeneration by planting or direct seeding.

Accelerated erosion and/or runoff from site preparation will be controlled by appropriate erosion controlling practices.

Comply with applicable laws and regulations, including the state's Best Management Practices (BMPs).

PURPOSE

To prepare land for establishing a stand of desirable woody vegetation by controlling undesirable vegetation, removing slash and debris, or altering site conditions.

CONSIDERATIONS

The chosen method should be cost effective and protect cultural resources, wildlife habitat, springs, seeps, wetlands, waterbodies, and other unique areas.

CONDITIONS WHERE PRACTICE APPLIES

In understocked areas, in areas where a land cover change to forest is desired, in areas where a timber harvest has been completed, or in areas having undesirable vegetation that inhibits or competes with preferred woody species.

PLANS AND SPECIFICATIONS

Plans will address method of site preparation, species, and protection required for desirable woody plants.

CRITERIA

The method, intensity and timing of site preparation will match the limitations of the site, safety, and equipment and the requirements of the regeneration species.

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation. Separate specifications are provided for natural and artificial regeneration in Attachment 1 - NH Supplement.

An appropriate site preparation method will be chosen to protect any desirable vegetation in understocked areas.

Plans and specifications will address species; method of preparation; and protection required for seed, seedlings, or cuttings; and protection of the site.

Remaining slash and debris shall not create habitat for or harbor harmful levels of pests.

OPERATION AND MAINTENANCE

Operation and maintenance requirements are not applicable for this practice.

Remaining slash and debris shall not hinder needed equipment operations or create undue fire hazard.

ATTACHMENT 1

NH Supplemental Specifications

1. GENERAL

- Use shelterwood cuts (gradual removal of the overstory) and/or vary the shape and orientation of clearcuts to provide the correct degree of shading and to conserve soil moisture.
- Use hand or power tools, or various machines, chemicals or fire to sever, girdle, poison, or otherwise eliminate unwanted vegetation in the fall or spring prior to seeding or planting.
- Use controlled burning or various machines (rollers, shears, choppers, blade and rake machines) to consume, reduce windrow or pile logging slash.
- When seeding is possible, mix humus and mineral soil prior to seedfall, log when ground is bare, i.e., no snow, and unfrozen and use random skidding patterns to make "seed spots".
- Use shelterwood cuts, seed tree cuts (semi-complete overstory removal) or carefully located clearcuts to provide an adequate source of desirable seed.
- Plan cutting times and access systems to provide for removal of shelterwood and seed trees to prevent damage to newly established stands.
- Depending on density and distribution, hardwood slash can provide shade and protect seedlings from deer browsing during the critical establishment period.
- Provide for control of seedling browsing by domestic livestock, deer, and rabbits.
- Provide for control of seed predation by birds and small mammals.
- Protect the area from fire, livestock, and soil erosion, as appropriate.

2. ARTIFICIAL REGENERATION

- For planting undesirable wooded/brushy site:
 - * Eliminate cull and undesired residual trees by girdling or chemical means. For recommendations refer to the most recent *New England Guide to Chemical Weed and Brush Control in Christmas Trees*.
 - * Control brush and dense herbaceous or grassy vegetation by chemical or mechanical means, but only to the extent necessary to facilitate planting.
 - * Reduce heavy slash concentrations only to the extent necessary to facilitate planting.
- For field plantings:
 - * As much as possible, plant in rows across the slope, leaving grass strips between rows.
 - * In the planting row, kill herbaceous vegetation by herbiciding and then plowing in the fall previous to spring planting. Then herbicide and plow again in the spring before planting.
 - * Use all herbicides in accordance with label instructions. Follow all local, state and federal law and regulations.
 - * If planting seed, a firm seedbed is important when seeding native plants. Seedbed is considered firm enough when a person's footprint penetrates $\frac{1}{4}$ to $\frac{1}{2}$ inch deep.
 - * If planting seed in land that had a row crop in the previous year, prepare site by using shallow (2 inches) spring disking about every 3 weeks prior to planting with the last disking just before seeding. 1/

- * If the seeding site is pasture or open areas composed of annual and perennial weeds, prepare by a late summer mowing to a height of 12 inches. Then follow with fall plowing in the planting row to a depth of at least 8 inches, and shallow spring disking about every 3 weeks up to the time of planting.

3. NATURAL REGENERATION

- Prior to logging eliminate unwanted advance regeneration using chemical or mechanical means.
- Eliminate cull and unwanted trees left after logging (mechanically or with chemicals). On droughty soils, leave 5-20 trees per acre standing to provide shade for seedlings during establishment.
- If possible, when regenerating white pine or light seeded hardwood species (birches, aspen), dispose of heavy slash and prepare a seedbed by mixing humus and mineral soil over at least 60% of the area.
- Plan for the removal of any trees left to provide shade or seed once the new stand is established.

4. NATURAL REGENERATION FOR FORESTED WETLAND RESTORATION ^{1/}

- To successfully use natural regeneration for wetland restoration and enhancement, seeds/propagules of the desired species must already be present on site (seed bank) or be capable of dispersing and establishing onto the site.
- To establish that a seed bank of viable, desirable species is present, examine the composition of the seed bank.
- If there is no seed bank, site should be disked prior to the dormant season and note the seed dispersal times (time of year) of target species.
- If desirable species do not become established, disking may have to be repeated the following year.
- Planting site should be no greater than 200 feet from the surrounding seed wall (Seed Wall – Desirable species of plants on adjacent land that have seeds capable of dispersing to the restoration site by wind, water or animals).

^{1/} NRCS *Wetland Restoration and Enhancement - Northeast Forested Wetlands*. NEDC Student Manual January 1998